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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,297	03/25/2004	Naoki Hasegawa	20-136	5496

7590 11/03/2005
Arnold International
P.O. BOX 129
Great Falls, VA 22066

EXAMINER

SMITH, PHILIP ROBERT

ART UNIT	PAPER NUMBER
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3739

DATE MAILED: 11/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/808,297	HASEGAWA, NAOKI	
	Examiner	Art Unit	
	Philip R. Smith	3739	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-13 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Restrictions

[01] Restriction to one of the following inventions is required under 35 U.S.C. 121:

[01a] Claims 1 & 7, drawn to an objective optical system in which half-field angles and aperture stop diameter relationships satisfy certain conditions, classified in class 359, subclass 362.

[01b] Claims 2 & 8, drawn to an objective optical system in which pixel size, numerical aperture, wavelength at e-line and image scale factor relationships satisfy certain conditions, classified in class 359, subclass 697.

[01c] Claims 3 & 9-11, drawn to a focus adjustment method for an image pickup unit, classified in class 359, subclass 798.

[01d] Claims 4 & 12, drawn to a focus adjustment apparatus for an image pickup unit, classified in class 359, subclass 811.

[01e] Claim 5, drawn to a range of focus determination method for an image pickup unit, classified in class 359, subclass 798.

[01f] Claims 6 & 13, drawn to a range of focus determination apparatus for an image pickup unit, classified in class 359, subclass 804.

[02] Inventions [01a] and [01b] are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention

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[01a] has separate utility such as for use in a telescope. See MPEP § 806.05(d).

[02a] It is necessary to search for invention [01a] in places where no pertinent art to image pickup elements having pixel size p ([01b]) exist, therefore causing a serious burden to the examiner.

[03] Inventions [01a] and [01c], [01d], [01e] or [01f] are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, inventions [01c], [01d], [01e] or [01f] have separate utility such as focus adjustment or range of focus determination in an image pickup unit that does not satisfy the conditions set forth with respect to half-field angles and aperture stop diameter relationships. See MPEP § 806.05(d).

[03a] It is necessary to search for invention [01a] in places where no pertinent art to focus adjustment or range of focus determination, therefore causing a serious burden to the examiner.

[04] Inventions [01b] and [01c], [01d], [01e] or [01f] are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, inventions [01c], [01d], [01e] or [01f] have separate utility such as focus adjustment or range of focus determination in an image pickup unit that does not satisfy the conditions set forth with respect to pixel size, numerical aperture, wavelength at e-line and image scale factor relationships. See MPEP § 806.05(d).

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[04a] It is necessary to search for invention [01b] in places where no pertinent art to focus adjustment or range of focus determination, therefore causing a serious burden to the examiner.

[05] Inventions [01c] or [01d] and [01e] or [01f] are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, inventions [01e] or [01f] have separate utility such as determining the range of focus for an image pickup unit. See MPEP § 806.05(d).

[05a] Inventions [01c] or [01d] and [01e] or [01f] have separate fields of search in that inventions [01c] and [01d] require multiple detections of a predetermined contrast value, and a calculation of a highest contrast position based on multiple detections.

[06] Inventions [01c] and [01d] are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case, the method of [01c], which consists of holding a contrast chart in a fixed position and moving an image pickup element, may be accomplished by hand without the aid of an object supporting part or a movable stage.

[06a] It is necessary to search for invention [01d] in places where specific

apparatus is required, whereas a broader search is required in the case of [01c] with respect to general focus adjustment methods not requiring specialized apparatus.

[07] Inventions [01e] and [01f] are related as process and apparatus for its practice.

The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case, the method of [01e], which consists of moving a contrast chart and holding an image pickup unit in a fixed position, may be accomplished by hand without the aid of a first stage having a support member or a second stage having a support member.

[07a] It is necessary to search for invention [01f] in places where specific apparatus is required, whereas a broader search is required in the case of [01e] with respect to general range of focus determination methods not requiring specialized apparatus.

Conclusion

[08] Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip R. Smith whose telephone number is (571) 272 6087 and whose email address is philip.smith@uspto.gov. The examiner can normally be reached between 9:00am and 5:00pm.

[09] If attempts to reach the examiner by telephone are unsuccessful, the examiner's

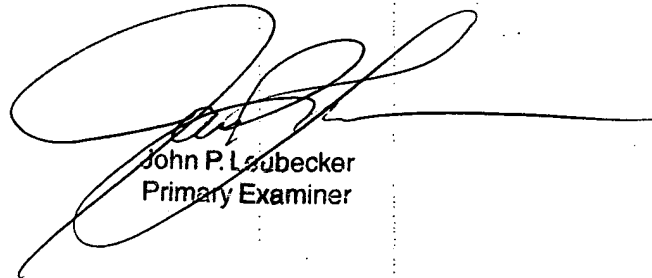
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supervisor, Linda Dvorak can be reached on (571) 272 4764.

- [10] Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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[11] prs



John P. Leubecker
Primary Examiner